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Specific Assays for Human Alkaline Phosphatase Isozymes.

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Specific assays for human intestinal and liver alkaline phosphatases were developed by use of isozyme specific monoclonal antibodies bound to paper discs. The assays are fast, specific and convenient to use as demonstrated by determinations of alkaline phosphatase isozymes in sera and tissues. In sera from forty healthy individuals the activity of the tissue unspecific alkaline phosphatase was determined to 32 ± 12 IU/l (mean \pm SD). The activity of the intestinal alkaline phosphatase was found to be ten-fold lower, 3.5 ± 6.3 IU/l (mean \pm SD), and of the placental alkaline phosphatase another ten-fold lower, 0.3 ± 0.2 IU/l (mean \pm SD), than that of the tissue unspecific alkaline phosphatase.

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Effect of Cinnarizine on IgE Antibody-Mediated Experimental Allergic Reactions in Guinea Pigs.

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The anti-allergic activity and mechanism of cinnarizine were investigated in guinea pigs. Cinnarizine protected against fatal systemic anaphylactic shock and inhibited Schultz-Dale reaction in tracheal muscle. Contractions of tracheal muscle caused by Ca, histamine and LTD₄ were also inhibited. However, cinnarizine failed to inhibit the release of histamine and SRS-A caused by antigen and calcium ionophore A23187 from lung tissues. These results suggest that the anti-allergic action of cinnarizine is mainly due to the antagonistic action to allergic mediators and not by interfering with the release of mediators.

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Role of Thromboxane (Tx) A₂ in Guinea Pig Forssman Shock and the Effect of OKY-046, TxA₂ Synthetase Inhibitor.

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To study the role of TxA₂ in Forssman systemic shock in guinea pigs, the effect of OKY-046, a specific TxA₂ synthetase inhibitor, was studied. OKY-046 clearly prolonged survival time and protected against fatal shock. A significant increase of TxB₂ and incoagulability of blood were observed after shock. OKY-046 inhibited the increase of TxB₂ and increased the amount of 6-keto-PGF_{1 α} . OKY-046 inhibited the biphasic increase in airway resistance caused by Forssman antibody. These data suggest a pathophysiological role for TxA₂ in Forssman systemic shock.